



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P2026 PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/CH2003/000189	International filing date (day/month/year) 24 March 2003 (24.03.2003)	Priority date (day/month/year) 18 April 2002 (18.04.2002)
International Patent Classification (IPC) or national classification and IPC B65H 29/00, 39/02, 5/28, 39/14, B42C 19/00, 1/10		
Applicant	FERAG AG	

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 10 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 28 March 2003 (28.03.2003)	Date of completion of this report 02 August 2004 (02.08.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH2003/000189

I. Basis of the report

1. With regard to the elements of the international application:*

the international application as originally filed

the description:

pages _____ 1-11 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

the claims:

pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19)
 pages _____, filed with the demand
 pages _____ 1-17 _____, filed with the letter of 19 April 2004 (19.04.2004)

the drawings:

pages _____ 1/5-5/5 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

the sequence listing part of the description:

pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/fig. _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

I. Basis of the report

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Prior art

Reference is made to the following documents:

D1: DE 195 05 277 A (WINDMOELLER & HOELSCHER), 23 May 1996
(1996-05-23)

D2: US-A-4 684 118 (BOSS HEINZ et al.), 4 August 1987
(1987-08-04)

D3: CH 687 306 A (BREHMER BUCHBINDEREIMASCHINEN),
15 November 1996 (1996-11-15)

D4: EP-A-0 579 940 (KOLBUS GMBH & CO KG), 26 January 1994
(1994-01-26)

D5: US-A-4 896 870 (KOBLER INGO), 30 January 1990 (1990-01-30)

I.5 Explanations supporting the interpretation of amendments that go beyond the disclosure of the international application as filed (PCT Article 34(2)(b))

1. Claim 1 defines a process with the features of the original claim 1, characterised in that the product supplement sets in the line are turned through 180° in a preparatory step before formation of the storage unit, such that the edges of the product supplement sets that were leading edges before being turned are trailing edges after turning.

- 1.1 In contrast to this, the international application as filed (see page 9, lines 11 to 22, and figure 4) discloses only the turning of product supplement sets with the product supplements in each product supplement set aligned along one edge or at one corner.

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1.2 The omission of the information contained in the above underlined phrase results in an alternative embodiment which is not clearly and immediately apparent from the original application, and which goes beyond the version originally filed (PCT Article 34(2)(b)). The same objection also applies to **claim 12** because the subject matter claimed therein is defined by corresponding features.

2. **Claim 6** defines a process according to one of claims 1 to 5, characterised in that the line (2) is created in such a way that the product supplement sets (7) overlap or in such a way that the product supplements overlap or in such a way that the product supplement sets are mutually spaced.

2.1 In contrast to this, the international application as filed (see page 9, lines 11 to 22) discloses only the feature whereby in the context of the turning of the product sets (i.e. in the context of the present claim 1) there is an overlap in the line (2) between whole sets, not between product supplements of each type.

2.2 From this it is clear that the information contained in the aforementioned underlined phrases is not found in the international application as filed.

3. **Claim 9** defines a process according to one of claims 1 to 8, characterised in that the product supplements in the product supplement sets (7) are stabilised by increasing the adhesion between the product supplements.

3.1 In contrast to this, the corresponding part of the

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international application as filed (see page , lines , and the original claim 11) discloses only the stabilising of product supplements in a line in which the product supplement sets are mutually spaced and no turning operation is carried out.

3.2 From this it is clear that the information contained in the aforementioned underlined phrases is not found in the international application as filed.

3.3 For the same reasons and with regard to the original claims 12, 13 and 17, the information contained in the following deleted phrases in **claims 10, 11 and 15** is not found in the international application as filed:

- Process according to one of claims 1 to 9,
characterised in that the product supplement sets (7)
are detachably joined to each other in the line (2)
after turning.
- Process according to claim 10, characterised in that
the product supplement sets (7) are joined by wrapping
a web of plastic film (30) around the line (2).
- Apparatus according to one of claims 12 to 14,
characterised in that the means for creating the line
(2) has a means for stabilising the product supplements
in the product supplement sets (7).

4. The subject matter of the characterising part of **claim 16** is not disclosed in the international application as filed.

I.6 Additional observations

1. The following comments relate to the question of whether

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the subject matter of independent claims 1 and 12 can be regarded as having been searched.

The present claim 1 has a preamble that corresponds to the subject matter of the original claim 1, and a characterising part containing the following features, for which the only support is in the passage at page 9, lines 11 to 22 of the original description and in figure 4:
Feature A: the product supplement sets in the line are turned through 180° in a preparatory step before formation of the storage unit, such that the edges of the product supplement sets that were leading edges before being turned are trailing edges after turning.

1.1 Any search in respect of the subject matter of the present claim 1 should at least cover processes that involve an essential feature of the claimed subject matter, namely the turning of the product supplement sets through 180°, yet this turning of the product supplement sets is not claimed in the original set of claims. The present claim 1 relates to a combination of features that would require a search covering different areas in the prior art, namely the prior art relating to the gathering and storage of products (IPC B65H 29 and B65H 39) and also the prior art relating to the turning of products (IPC B65H 15). In the present instance there was no reason to extend the search in respect of the original set of claims to cover the prior art relating to the turning of products, and therefore the subject matter of independent claim 1 can be regarded as incompletely searched.

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1.1.1 Regarding the original scope of protection sought, the only features of the original claims that might relate indirectly to feature A are the following features in the original claim 9:

Feature B: the line is created in such a way that the product supplement sets overlap (cf. the relevant part of the original claim 6),

- each product supplement in each product supplement set having an aligned edge or corner, and the product supplement sets being picked up by said aligned edges or corners for extraction from the line (cf. the original claim 7),
- Feature B1: the aligned edges being leading edges in the line (cf. the first alternative in the original claim 9), or
- Feature B2: the aligned edges being trailing edges in the line (cf. the second alternative in the original claim 9).

This feature, like the whole of the original set of claims, specifies that the line extends from the means for creating the line of product supplement sets (each consisting of a plurality of different product supplements) to the means for extracting the product supplement sets from the head of the line, downstream of the means for forming storage units. Feature B can thus also relate to a process that does not require turning of the product supplement sets; this would be the case if the line were created in such a way that the product supplement sets overlapped and contained product supplements each having one aligned edge (for example, the trailing edge), and if the product supplement sets

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were picked up by said aligned edges (now leading edges) for extraction from the line. The embodiment described at page 9, lines 11 to 22 of the original description and shown in figure 4 was thus regarded as just one possible implementation of the process claimed by Feature B, but not as subject matter that implicitly required searching.

- 1.1.2 The special features defined in the characterising part of the present claim 1 are considered to make a contribution inasmuch as they solve the problem of how to ensure that the areas which are leading areas when the product supplement sets are formed must be leading areas again when the product supplement sets are transferred for further processing. However, the original application does not explicitly present this as one of the problems addressed by the invention, and consequently there was no reason to carry out a search for solutions to such a problem.
- 1.2 For the same reasons the subject matter of independent claim 12 can also be regarded as incompletely searched.

2. Although the subject matter of claims 1 and 12 has not been completely searched, the question of whether it involves an inventive step was deemed examinable because the turning of printed products is an operation that is known from the prior art, and in the present instance is identifiable as a fact that can be used in the examination of this question without the support of additional documents.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-17	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-17	NO
Industrial applicability (IA)	Claims	1-17	YES
	Claims		NO

2. Citations and explanations

1. Document D1 discloses a process for transferring pluralities of flat products to a serial further processing stage, wherein in a preparatory step product sets (12), each consisting of one of the said pluralities of products, are arranged in a line and the line advances in a first direction (a) to form a storage unit, and wherein in a transfer step which is physically and temporally separated from the preparatory step to any desired extent the storage unit is detached in a second direction (c), which is the opposite of the first direction (a), and product sets (12) are extracted in turn from the head of the new line created by the detachment of the storage unit and are transferred directly for further processing (cf. claim 1 in part).

Equally documents D2 to D5 can also be regarded as relevant to the subject matter of the preamble of claim 1. With regard to these documents in particular, which relate to the handling of signatures, it is noted that a signature falls under the definition of a product supplement set consisting of a plurality of different flat products or sheets.

2. The subject matter of claim 1 differs from the above in that the product supplement sets in the line are turned

through 180° in a preparatory step before formation of the storage unit, such that the edges of the product supplement sets that were leading edges before being turned are trailing edges after turning.

3. The problem addressed by the present invention can therefore be seen to reside in the fact that the edges which are leading edges when the product supplement sets are formed must be leading edges again when the product supplement sets are transferred for further processing.
4. The solution proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) because the turning of products through 180° is a handling step that is known from the prior art as a solution to problems of orientation for flat products. A person skilled in the art would therefore regard the inclusion of this step in one of the prior art processes described in D1 to D5 as a routine solution to the problem in question, since the resulting effects and advantages are readily predictable.
5. The question of whether the subject matter of claim 1 is inventive can also be examined in the following stages:
 - In the prior art relating to the handling of flat products there are various reasons why products may need to be turned through 180° so that the edges which are leading edges before turning are trailing edges after turning (cf. the characterising part of claim 1), or why the surface which is on top before turning is on the bottom after turning.
 - The subject matter of claim 1 differs from the prior art by virtue of the features of the preamble.
 - The problem addressed by the present invention can therefore be seen as that of storing the products temporarily.

- The stating of this problem cannot be considered inventive because the problem is generally known in the field of flat product handling (see D1 to D5).
- For a person skilled in the art it would be a routine procedure to combine all the features of claim 1 in order to solve the problem addressed. The subject matter of claim 1 thus does not involve an inventive step and therefore fails to meet the requirement of PCT Article 33(3).

6. Claim 12 relates to a device with corresponding features, and therefore its subject matter cannot be considered inventive either for the same reasons (PCT Article 33(3)).

7. Dependent claims 2 to 13 and 15 to 17 do not appear to contain any additional features that would constitute subject matter involving an inventive step when combined with the features of any of the back-referenced claims. These features are all known from the prior art and have already been used for the same purpose in the context of the gathering and/or temporary storage of flat products (see the documents cited in the international search report). Moreover, the features relate merely to design features which solve separate problems and do not produce any surprising effects when combined.

8. Thus the application fails to meet the requirement of PCT Article 33(3) because the subject matter of claims 1 to 17 does not involve an inventive step (PCT Rule 65.1 and 65.2).